

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

REC'D 04 MAY 2004

Applicant's or agent's file reference PAT 852W-90	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/CA 03/00016	International filing date (day/month/year) 10.01.2003	Priority date (day/month/year) 12.01.2002
International Patent Classification (IPC) or both national classification and IPC B01J8/06		
Applicant SAUDI BASIC INDUSTRIES CORPORATION et al.		


- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

- This report contains indications relating to the following items:

- | | | |
|------|-------------------------------------|--|
| I | <input checked="" type="checkbox"/> | Basis of the opinion |
| II | <input type="checkbox"/> | Priority |
| III | <input type="checkbox"/> | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| IV | <input type="checkbox"/> | Lack of unity of invention |
| V | <input checked="" type="checkbox"/> | Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| VI | <input type="checkbox"/> | Certain documents cited |
| VII | <input type="checkbox"/> | Certain defects in the international application |
| VIII | <input type="checkbox"/> | Certain observations on the international application |

Date of submission of the demand 26.06.2003	Date of completion of this report 03.05.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Thomasson, P Telephone No. +49 89 2399-8339



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/CA 03/00016**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-16 as originally filed

Claims, Numbers

1-14 as originally filed

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-14
Inventive step (IS)	Yes: Claims	
	No: Claims	1-14
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/CA03/00016

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

D1: EP-A-0 715 886 (BASF AG) 12 June 1996 (1996-06-12)
D2: US-A-5 071 627 (CHOI BYUNG C ET AL) 10 December 1991 (1991-12-10)
D3: PATENT ABSTRACTS OF JAPAN vol. 009, no. 317 (C-319), 12 December 1985 (1985-12-12) & JP 60 153936 A (BABCOCK HITACHI KK), 13 August 1985 (1985-08-13)
D4: DE 859 297 C (ERNST SCHMIDT BRAUNSCHWEIG DR) 11 December 1952 (1952-12-11)
D5: US-A-2 778 610 (ERNEST BRUEGGER) 22 January 1957 (1957-01-22)
D6: PATENT ABSTRACTS OF JAPAN vol. 013, no. 273 (C-609), 22 June 1989 (1989-06-22) & JP 01 067246 A (MITSUBISHI ELECTRIC CORP), 13 March 1989 (1989-03-13)
D7: US-A-3 289 644 (NORIO MOTEGI ET AL) 6 December 1966 (1966-12-06)

2. The present application does not meet the requirement of Article 33(2) PCT for the following reasons:

D1-D7 disclose a **tubular reactor** having an **heat-exchanger shell** and at least one **tube** within the shell which comprises at least one heat-pipe on its surface in order to regulate the temperature of the reaction (see D1-D7: International Search Report). Therefore the subject-matter of claim 1 is not novel.

3. The technical features of claims 2-14 are either known from D1-D7 or are considered to be merely one of several possibilities which the skilled person would select, in accordance with the circumstances, without the exercise of inventive skill. Consequently these claims do not meet the requirement of Article 33(2) and (3) PCT.